CLAIMS

1. A semiconductor laser apparatus, comprising:

a semiconductor laser array;

a heat sink on which said semiconductor laser array is mounted;

a refrigerant including fluorocarbon and flowing inside said heat sink;

a refrigerant supplier for supplying the refrigerant to said heat sink;

an insulating piping connected between said heat sink and said refrigerant supplier, and flowing the refrigerant inside said piping; and

a conductive material arranged in said insulating piping in a grounded state.

2. A semiconductor laser apparatus according to claim 1, wherein said conductive material has a mesh structure covering the cross-section of the flow path within said insulating piping.

3. A semiconductor laser apparatus according to claim 1 or 2, wherein the cross-section of said conductive material in parallel to the streamline of the refrigerant includes a portion with a streamline shape.

4. A semiconductor laser apparatus according to any one of claims 1 to 3, wherein said insulating piping includes an expanded diameter portion having a locally expanded inner diameter, and said conductive material is arranged at said expanded diameter portion.

5. A semiconductor laser apparatus according to any one of claims 1 to 4, wherein said semiconductor laser array has a plate shape, and said heat sink also has a plate shape, and said semiconductor laser unit is constructed by said semiconductor laser array and said heat sink.

6. A semiconductor laser apparatus, comprising:

a plurality of semiconductor laser units each having the same structure as that in a semiconductor laser apparatus according to claim 5,

wherein said plurality of semiconductor laser units are stacked such that said semiconductor laser units and heat sinks are alternately arranged to each other.